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[Page 42855-42858]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-18585; Directorate Identifier 2004-NE-28-AD; Amendment 39-13731; AD 2004-14-22]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Canada PW206B, PW206C, PW206E, PW207D, and PW207E Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Pratt & Whitney Canada (PWC) PW206B engines that have incorporated PWC Service Bulletin (SB) No. 28119, and PW206C, PW206E, PW207D, and PW207E turboshaft engines. This AD requires checking the automatic low-cycle-fatigue (LCF) counting data made by the engine Data Collection Unit (DCU) on installed engines, and validating proper DCU automatic LCF counting before an engine is installed. This AD results from two reports of irregular LCF counting, observed between engines on the same helicopter, during weekly recording of LCF data in the engine log books. We are issuing this AD to prevent critical rotating parts from exceeding published life limits, which could result in uncontained engine failure and possible loss of the helicopter.

DATES: Effective August 3, 2004. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of August 3, 2004.

We must receive any comments on this AD by September 17, 2004.

ADDRESSES: Use one of the following addresses to submit comments on this proposed AD.

- DOT Docket Web site: Go to *http://dms.dot.gov* and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to *http://www.regulations.gov* and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001.
- Fax: (202) 493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You can get the service information identified in this AD from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G1A1.

You may examine the comments on this AD in the AD docket on the Internet at *http://dms.dot.gov*.

FOR FURTHER INFORMATION CONTACT: Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7178; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: Transport Canada (TC), which is the airworthiness authority for Canada, recently notified us that an unsafe condition may exist on PWC PW206B engines that have incorporated PWC SB No. 28119, and PW206C, PW206E, PW207D, and PW207E turboshaft engines. Transport Canada advises that two reports of irregular LCF counting were observed between engines on the same helicopter, during weekly recording of LCF data in the engine log books. PWC investigated and confirmed that irregular DCU LCF count recordings can occur, registering above and below the LCF count data of a paired reference engine. LCF cycle count data is used to track life-limited critical rotating parts. Pratt & Whitney Canada determined that cycle counting history by the DCU becomes corrupted if system electrical power is shut off before the completion of data transfer. Data transfer occurs after engine shutdown, as the compressor revolutions per minute (rpm) decelerates through 20% speed. Operators must verify the DCU data each week as described in the maintenance manual. However, some operators have not been verifying this data. This condition causes potential for some life limited rotating parts to be close to or even beyond the currently approved published life limits.

Relevant Service Information

We have reviewed and approved the technical contents of PWC Alert Service Bulletin (ASB) No. PW200-72-A28252, Revision 2, dated March 11, 2004. That ASB describes procedures to compare the LCF counting data recorded by the DCU to the data recorded in the engine log books. We have also reviewed and approved the technical contents of PWC service bulletin (SB) No. PW200-72-28253, dated February 12, 2004, that describes procedures for validating proper DCU automatic LCF counting before an engine is installed. Transport Canada classified these SBs as mandatory and issued AD No. CF-2004-06, dated March 31, 2004, in order to ensure the airworthiness of these PWC engines in Canada.

Bilateral Airworthiness Agreement

These PWC PW206B, PW206C, PW206E, PW207D, and PW207E turboshaft engines are manufactured in Canada and are type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Under this bilateral airworthiness agreement, Transport Canada has kept the FAA informed of the situation described above. We have examined the findings of Transport Canada, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other PWC PW206B, PW206C, PW206E, PW207D, and PW207E turboshaft engines of the same type design. We are issuing this AD to prevent critical rotating parts from exceeding published life limits, which could

result in uncontained engine failure and possible loss of the helicopter. This AD requires a Comparison Check and a Consistency Check of the automatic LCF counting data made by the engine DCU on installed engines, at the following:

- For engines with impeller and or compressor turbine (CT) disks and or power turbine (PT) disks having fewer than 2,000 cycles life limit remaining on the effective date of the AD; within the next 50 engine flight hours or two months, whichever occurs first, after the effective date of this AD; and
- For engines with impeller and or CT disks and or PT disks having from 2,000 to 5,000 cycles life limit remaining on the effective date of the AD; within the next 200 engine flight hours or three months, whichever occurs first, after the effective date of this AD; and;
- For engines with impeller and or CT disks and or PT disks having more than 5,000 cycles life limit remaining on the effective date of the AD; within the next 500 engine flight hours or four months, whichever occurs first, after the effective date of this AD.

This AD also requires validating proper DCU automatic LCF counting before an engine is installed. You must use the service information described previously to perform the actions required by this AD.

FAA's Determination of the Effective Date

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Docket Management System (DMS)

We have implemented new procedures for maintaining AD dockets electronically. As of May 17, 2004, we posted new AD actions on the DMS and assigned a DMS docket number. We track each action and assign a corresponding Directorate identifier. The DMS docket No. is in the form "Docket No. FAA-200X-XXXXX." Each DMS docket also lists the Directorate identifier ("Old Docket Number") as a cross-reference for searching purposes.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2004-18585; Directorate Identifier 2004-NE-28-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

We will post all comments we receive, without change, to *http://dms.dot.gov*, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the DMS Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78) or you may visit *http://dms.dot.gov*.

We are reviewing the writing style we currently use in regulatory documents. We are interested in your comments on whether the style of this document is clear, and your suggestions to improve the clarity of our communications with you. You can get more information about plain language at *http://www.faa.gov/language* and *http://www.plainlanguage.gov*.

Examining the AD Docket

You may examine the docket that contains the AD, any comments received, and any final disposition in person at the DMS Docket Offices between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in ADDRESSES. Comments will be available in the AD docket shortly after the DMS receives them.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-14-22 Pratt & Whitney Canada: Amendment 39-13731. Docket No. FAA-2004-18585; Directorate Identifier 2004-NE-28-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective August 3, 2004.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Pratt & Whitney Canada (PWC) PW206B engines that have incorporated PWC Service Bulletin (SB) No. 28119, and PW206C, PW206E, PW207D, and PW207E turboshaft engines. These engines are installed on, but not limited to, Augusta 109E, Bell 427, Eurocopter EC135, and MD Explorer helicopters.

Unsafe Condition

(d) This AD results from two reports of irregular LCF counting observed between engines on the same helicopter, during weekly recording of LCF data in the engine log books. We are issuing this AD to prevent critical rotating parts from exceeding published life limits, which could result in uncontained engine failure and possible loss of the helicopter.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Confirmation of Data Collection Unit (DCU) Properly Collecting Engine Low-Cycle-Fatigue (LCF) Data, and Confirmation of Engine LCF Count Values

(f) To confirm that the data stored in the DCU is correct and that the data recorded in the engine log books is correct, do a Comparison Check and a Consistency Check as specified in paragraphs (g) and (h) of this AD, within the following compliance requirements:

(1) For engines with impeller and or compressor turbine (CT) disks and or power turbine (PT) disks having fewer than 2,000 cycles life limit remaining on the effective date of this AD, do a Comparison Check and a Consistency Check within the next 50 engine flight hours or two months, whichever occurs first, after the effective date of this AD; and

(2) For engines with impeller and or CT disks and or PT disks having from 2,000 to 5,000 cycles life limit remaining on the effective date of this AD; do a Comparison Check and a Consistency Check within the next 200 engine flight hours or three months, whichever occurs first, after the effective date of this AD; and

(3) For engines with impeller and or CT disks and or PT disks having more than 5,000 cycles life limit remaining on the effective date of this AD; do a Comparison Check and a Consistency Check within the next 500 engine flight hours or four months, whichever occurs first, after the effective date of this AD.

Comparison Check

(g) Do a Comparison Check of the data stored by the DCU using paragraph 3.C of PWC Alert Service Bulletin (ASB) No. PW200-72-28252, Revision 2, dated March 11, 2004. Interpret the results of the Comparison Check using paragraphs 3.C.9.a. and 3.C.9.b. of PWC ASB No. PW200-72-28252, Revision 2, dated March 11, 2004. If necessary, restore baseline LCF life of components using manual counting using paragraph 3.E of PWC ASB No. PW200-72-28252, Revision 2, dated March 11, 2004.

Consistency Check

(h) Do a Consistency Check by reviewing the engine log books to confirm the impeller, CT, and PT disks LCF counts are correct using paragraph 3.D. of PWC ASB No. PW200-72-28252, Revision 2, dated March 11, 2004.

(1) Interpret the results using paragraphs 3.D.5 and 3.D.6 of PWC ASB No. PW200-72-28252, Revision 2, dated March 11, 2004.

(2) If necessary, restore the baseline LCF life of components using manual counting as indicated in paragraph 3.E. of PWC ASB No. PW200-72-28252, Revision 2, dated March 11, 2004.

Components Exceeding Published Life Limit

(i) Before further flight, replace any impeller, CT, or PT disk that exceeds its published life limit.

Validating Proper DCU Automatic LCF Counting Before an Engine Is Installed

(j) Before an engine is installed, validate the proper DCU automatic LCF counting using the checks in paragraphs (g) and (h) of this AD and using paragraphs 3A. through 3.A.(21)(a)15 of PWC Service Bulletin (SB) No. PW200-72-28253, dated February 12, 2004.

Previous Credit

(k) Previous credit is allowed for Comparison Checks and Consistency Checks that were done in accordance with the Original, Revision 1, or Revision 2 of PW ASB No. PW200-72-A28252, before the effective date of this AD.

Alternative Methods of Compliance

(l) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(m) You must use the Pratt & Whitney Canada service information specified in Table 1 to perform the checks required by this AD. The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 1 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G1A1; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

TABLE 1.—INCORPORATION BY REFERENCE

Service bulletin No.	Page	Revision	Date
PW200–72–A28252 Total Pages: 11	ALL	2	March 11, 2004.
PW200–72–28253 Total Pages: 10	ALL	Original	February 12, 2004.

Related Information

(n) Transport Canada airworthiness directive No. CF-2004-06, dated March 31, 2004, also addresses the subject of this AD.

Issued in Burlington, Massachusetts, on July 7, 2004.
Peter A. White,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 04-16005 Filed 7-16-04; 8:45 am]
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